Items for Low Volume Waste Discussion

Where to collect samples and what list of parameters to evaluate?

- List of parameters and methods proposed for samples from internal waste streams at Chesterfield.

How will DEQ evaluate data?

- Site- and discharge-specific evaluation based on DEQ Water Quality-Based permitting approach similar to dewatering

Kenneth Roller (Services - 6)

From: Scott Sheridan [SSheridan@Geosyntec.com]
Sent: Wednesday, February 04, 2015 11:36 PM
To: Beverly Wood (Generation - 3); Kenneth Roller (Services - 6)
Cc: Chris M Gee (Generation - 34); Mark Bauer; Mike Hayes; Kyle LaClair
Subject: Water Quality Sampling and Analysis - Meeting Notes
Attachments: CPS Waste Water Testing Matrix.xlsx

Beverly and Ken, if you have a few moments, can you please review the matrix that is attached? This includes the water sources we discussed and sampling parameters. I could particularly use help refining the parameter list by source as we discussed in the meeting so that we can prepare our sampling plan accordingly. I also provided some pertinent notes below from the meeting. Mark Bauer will be managing the project for Geosyntec, including preparing a sampling plan, installing samplers, managing sample collection, and managing analytical testing. I assume that we will use Dominion's analytical testing lab for the work and that they would bill Dominion directly. Please provide contact information.

- Sampling of stormwater from the coal pile yard, Coxendale, and sierra ditch will be by automatic samplers.
- Sampling of the various operational waters that go through the master sump will be conducted when the station indicates each particular waste stream is being produced. We will either sample manually or sample with automatic samplers that will collect a grab sample every hour for a certain period of time, possibly 24 hours. This would be a significant number of bottles if more than a few hours. We may also collect composite samples. Modification of the end of the pipe with a sampling reservoir would be necessary.
- The station has waste load allocations of 300,000 lbs N and 2,000 lbs P.
- Fly ash leaching tests should be rerun in April after the additional mercury control systems are installed.
- The retention basin ahead of the low volume waste pond should designed to contain the volume of the largest oil containing vessel in the plant.
- The discharge from the FGD WWT plant will be directed to a separate outfall. Landfill leachate may be commingled with the FGD waste stream.

Scott

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	Master Sump - Boiler Blowdown[1]	Master Sump - Sump Drains[1]	Master Sump - Demineralizer Waste[1]	Master Sump - Cooling Tower Blowdown[1]	Master Sump - FGD WWT Backwash[1]	Coal Pile Runoff	"S" Ditch Runoff	Coxendale Runoff	Metals Pond Discharge	Landfill Leachate [2]
Field Parameters										
Conductivity	x	x	x	x	x	x	x	x	x	N/A
Dissolved Oxygen	x	x	x	x	x	x	x	x	x	N/A
pH	x	x	x	x	x	x	x	x	x	N/A
Temperature	x	x	x	x	x	x	x	x	x	N/A
Bottle 1 - Metals[3]										
Arsenic	x	x	x	x	x	x			x	x
Boron	x	x	x	x	x	x			x	x
Cadmium	x	x	x	x	x	x			x	x
Calcium	x	x	x	x	x	x			x	x
Chromium	x	x	x	x	x	x			x	x
Copper	x	x	x	x	x	x			x	x
Iron	x	x	x	x	x	x			x	x
Lead	x	x	x	x	x	x			x	x
Magnesium	x	x	x	x	x	x			x	x
Manganese	x	x	x	x	x	x			x	x
Nickel	x	x	x	x	x	x			x	x
Selenium	x	x	x	x	x	x			x	x
Thallium	x	x	x	x	x	x			x	x
Zinc	x	x	x	x	x	x			x	x
Bottle 2										
Mercury	x	x	x	x	x	x			x	x
Bottle 3 - Solids										
TDS	x	x	x	x	x	x			x	x
TSS	x	x	x	x	x	x	x	x	x	x
Bottle 4 - Nutrients										
Ammonia	x	x	x	x	x	x	x	x		x
TKN	x	x	x	x	x	x	x	x		x
Total Phosphorus	x	x	x	x	x	x	x	x		x
Bottle 5 - Salts										
Nitrate	x	x	x	x	x	x	x		x	x
Nitrite	x	x	x	x	x	x	x		x	x
Bromides	x	x	x	x	x	x	x		x	x
Chlorides	x	x	x	x	x	x	x		x	x
Sulfates	x	x	x	x	x	x	x		x	x
Bottle 6										
Oil and Grease	x	x	x	x	x	x	x	x	x	x

[1] Samples to be collected from master sump pipe at the master sump retention basin. Dominion to coordinate with Geosyntec for times when various flows occur.

[2] Use leaching procedures on dry samples

[3] Metals will be tested for Totals and Dissolved concentrations